



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,438	07/03/2003	Shiva Prakash	061450/0304608	5116

7590 09/09/2004  
PILLSBURY WINTHROP LLP  
2550 Hanover Street  
Palo Alto, CA 94304-1115

EXAMINER

RAEVIS, ROBERT R

ART UNIT	PAPER NUMBER
----------	--------------

2856

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/613,438

**Applicant(s)**

PRAKASH, SHIVA

**Examiner**

Robert R. Raevis

**Art Unit**

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1-3,6,8 is/are rejected.
- 7) ☒ Claim(s) 7 and 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The disclosure is objected to because of the following informalities: the status of the parent application should be updated on page 1.

Appropriate correction is required.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khandros et al '738, in view of either Kanamaru et al '023 or Mackawa et al, and further in view of Verdi et al.

Khandros et al teach (Figures 11,12) a "probe" (col. 2, lines 49,52) that includes an elongate support 187 that extends all the way to pad 103, and conducting film 190 over the support. The structure forms a probe contact, and the lowermost end of the support includes a coating with a rounded surface.

Khandros does not state that the end of the support 187 is "rounded", and does not make reference to "atomic force microscope"

As to claim 1, it would have been obvious to employ a rounded lower tip for support 187 because either (1) Kanamaru (col. 1, lines 45-55) teaches use of curved probes that allow for breaking of oxide films on pads during testing, or (2) Mackawa et al teach (col. 5, lines 57+, and continuing on to col. 6, line 17) use of a spherically tipped probe to provide for a tip that can establish a fresh contact surface with a pad under test. No weight was given to the preamble of Applicant's claim as it is only a statement of intended use.

As to claims 2,3, note Kanamaru's dimensions on col. 1, line 49.

Art Unit: 2856

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khandros et al '738, in view of either Kanamaru et al '023 or Mackawa et al, and further in view of Verdi et al.

Comments that exist above regarding claims 1-3 identically apply here.

As to claims 6,8, Khandros states (col. 1, lines 27-32) that his (probe) device may be used for testing substrates by making temporary contacts against pads, but does not describe the nature of the pad. As to claim 6, it would have been obvious to utilize Verdi's particular pad (which "includes a metal coating", line 6 from bottom of the ABSTRACT) as Khandros's "pad" (col. 1, line 32) because Khandros's generic/broad reference to a pad is suggestive of use of any known pad (Verdi's "metal coating") pad in the semiconductor industry.

Claims 7,9,10,11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 4, note was made of combination of the particularly claimed steps (emphasis upon the "coating the rounded piece...up to the distal region" (lines 3-5 from last) for the method "of making an atomic force microscope arm for performing atomic force microscopy measurements of an electrically-dependent property of a sample" (lines 1-3). Full weight was given to the preamble of claim 4, as there is not intended use in a method claim.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Regarding Applicant's REMARKS, please consider the following:

As to p. 5, first paragraph; the argument is more narrow than the claimed subject matter. The coating of Khandros extends is "disposed over the contact region and the support member up to the distal region", and even extends beyond the distal region.

As to p. 5, second full paragraph; the measurement made by measurement circuitry in Khandros is related to a characteristic related to the first film and the second film contacting, that characteristic being that the films are both conductive to allow for measurement to take place. Please contrast Applicant's claim 6 with that of Claim 7.

Claims 7,9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2856

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Robert*

RAEVIS —